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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 09/820,499   | 03/29/2001  | Seong R. Yu          | AUS920010195UI<br>(9000/36) | 5098             |
| 7590 05/21/2004  |             |                      | EXAMINER                    |                  |
| Frank C. Nicholas<br>CARDINAL LAW GROUP<br>1603 Orrington Avenue, Suite 2000<br>Evanston, IL 60201 |             |                      | STEELMAN, MARY J            |                  |
|  |             |                      | ART UNIT                    | PAPER NUMBER     |
|  |             |                      | 2122                        |                  |

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/820,499

Applicant(s)

YU, SEONG R.

Examiner

Mary J. Steelman

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2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/16/01, 3/29/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date #4, 3/29/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-20 are pending.

#### ***Information Disclosure Statement***

2. IDS submitted 03/29/2004 has been considered.

#### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "42" and "44" has been used to designate steps taken after step 38, whether the yes or no path is taken. Additionally step 52 is not mentioned in the Specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

4. Claims 16-20 are objected to for improper numbering.

Claim 16 recites, "The computer program product of claim 9..." should be -- The computer program product of claim 15...-- Change '9' to '15'.

Claim 17 recites, "The computer program product of claim 9..." should be -- The computer program product of claim 15...-- Change '9' to '15'.

Claim 18 recites, "The computer program product of claim 11..." should be -- The computer program product of claim 17...-- Change '11' to '17'.

Claim 19 recites, "The computer program product of claim 9..." should be -- The computer program product of claim 15...-- Change '9' to '15'.

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Claim 20 recites, "The computer program product of claim 9..." should be -- The computer program product of claim 15...-- Change '9' to '15'.

Claim 19 recites "wherein the detector...", should be --wherein the means for detecting...--

Claim 20 recites, "for use in migrating ...", should be "further comprising the means for migrating ..."

### *Specification*

5. The use of the trademark JAVA has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Additionally, as taken from the Sun Microsystems web site:

#### **Rules of Proper Trademark Use.**

##### **A. Use Sun Trademarks as Adjectives, Never as Nouns.**

Please follow every Sun trademark with an appropriate noun consisting of the Sun product or service that is branded with the mark. Sun trademarks are adjectives and may not be used as nouns, or alone as a shorthand way of identifying a product or service. The Sun trademark should be used as an adjective describing a product or service of Sun Microsystems.

### *Claim Rejections - 35 USC § 101*

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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the claimed invention is directed to non-statutory subject matter. Claims 9-14 are rejected as being non statutory. A lexical analyzer is a program per se. Since a computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process and is treated as a claim for a computer program, without the computer-readable medium needed to realize the computer program's functionality, as nonstatutory functional descriptive material.

**(b) Nonfunctional Descriptive Material**

Descriptive material that cannot exhibit any functional interrelationship with the way in which computing processes are performed does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. 101.

This could be cured by changing "A lexical analyzer" to "A lexical analyzer, tangibly embodied on a computer readable medium..." or "A lexical analyzer system..."

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,317,509 to Caldwell.

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Per claim 1, 9, and 15:

-receiving an input stream of characters; (FIG. 2(a). Col. 1, lines 52-55, "...system and method for tokenizing a source program written in a programming language that is represented by both single byte [and] two type values.", col. 2, lines 1-2, "...a sequence of characters is entered into the compiled lexical analyzer...", col. 3, lines 30-31, "A lexical analyzer is the first phase of compiler. Its main task is to read the input characters from the source program...", col. 5, lines 1-2, "...the source program which consists of a sequence of characters is entered into lexical analyzer...")

-detecting a delimiter in the input stream, the delimiter being selected from the group consisting of a single character delimiter and a multi-character delimiter; (See FIG. 6. Col. 2, lines 6-10, "...lexical analyzer which easily recognizes a heterogeneous input stream of single and two byte characters.", col. 4, lines 26-28, "Patterns or sequences of characters are specified by a regular expression.", col. 4, lines 35-39, "FSA's are usually designed to analyze (recognize) strings from a particular programming language (detecting a delimiter in the input stream). The sentences would be broken down into tokens by the FSA and used as an input into parser.", col. 6, lines 17-20, "The present invention provides a system and method for factoring regular expressions containing two byte characters (multi-character delimiter) into regular expressions containing single byte characters (single character delimiter).")

-returning a token upon detecting the delimiter. (See FIG 3, "Print Token", Col. 5, lines 64-65, "...the token representation of the lexeme "HERE" would be sent to the parser (return a token)")

Per claim 2:

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-reading the input stream one character at a time. (Col. 3, lines 31-32, "...read the input characters from the source program...", col. 3, lines 38-39, "...lexical analyzer reads input characters until it can identify the next token.", col. 5, lines 1-10, "...sequence of characters is entered into lexical analyzer...", col. 5, lines 57-61, (See FIG. 3) "...if lexical analyzer moves from state S to state C in response to the letter "H" it will remain in a halt state C via transition line for letters "E, "R", and "E"...") Lexical analyzer reads one character at a time until a delimiter (blank space) is encountered.)

Per claim 3, 10, and 16:

-forming the token by appending to a string at least one of the input stream characters preceding the delimiter. (Col. 3, lines 36-39, "Upon receiving a "get next token" command from the parser, the lexical analyzer reads input characters until it can identify the next token", col. 5, lines 57-65, "...if the lexical analyzer moves from state S to state C in response to the letter "H" it will remain in halt state C via transition line for letters "E", "R", and "E". It then will encounter a blank (delimiter) in the input string, thus the lexical analyzer would halt, and print "HERE" (token formed of characters preceding the delimiter). Once the lexical analyzer exits halt state C the token representation of the lexeme "HERE" would be sent to the parser.")

Per claims 4, 11, and 17:

-detecting a delimiter-token; (FIG. 3. Col. 5, lines 4-7, "When it recognizes a set of input character matching one of the regular expressions in the input specification it executes the corresponding associated action." (detect a delimiter-token and form a lexeme / token), col. 5,

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lines 64-65, "Once the lexical analyzer exits halt state C the token representation of the lexeme "HERE" would be sent to the parser. (delimiter / blank space encountered, therefore lexeme / token formed and sent to parser).)

-returning the token upon detecting the delimiter token. (Col. 3, lines 32-33, "...produce as an output a sequence of tokens...", col. 3, lines 45-46, "The token sequence emitted by lexical analyzer...", col. 5, lines 9-10, "Typically the output from lexical analyzer is a set of tokens." Also see FIG. 3, upon detecting a delimiter, lexical analyzer exits the halt state and sends the preceding lexeme to parser.)

Per claim 5:

-returning the delimiter-token. (See FIG. 3, "PRINT 'A SPACE'".)

Per claims 6, 12, and 18:

-wherein the delimiter-token is returned on a subsequent call to a lexical analyzer. (See FIG. 3, "PRINT 'A SPACE'". A space is printed every time the finite state machine detects a delimiter and produces the preceding lexeme.)

Per claims 7, 13, and 19:

-comparing at least one of the input stream characters to a single character delimiter table and a multiple character delimiter table. (Col. 6, lines 2-3, "...checks to see if it is a legal character.", col. 6, lines 7-8, "...may need to look up a combination of single byte and two byte characters...", col. 8, lines 21-22, "...standard construction of a transition table...", col. 8, lines



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40-47, "...checks every character in the input string to determine whether its two byte representation falls between the valid range...then a state transition is made...", col. 9, lines 35-37, "Consequently, since the Kanji (multi-byte) characters can now be represented with single bytes, the transition table only needs 257 columns. (transition table is used for single character and multiple characters))

Per claim 8, 14, and 20:

-for use in migrating pre-existing software code from a first version to a second version of a predetermined language. (Col. 2, lines 59-60, "Compiler is configured to transform a source program into optimized executable code...", col. 3, lines 28-29, "...source program is entered into the system and optimized object code is produced..." Compilers transform a program from one form to another.)

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Note: "Steer clear of JAVA pitfalls", September 2000, by Michael C. Daconta. Article discloses a technique to manage a three character delimiter.

"StringDelimiter.java", 1998, by Jerry Smith. Article discloses a technique to manage multicharacter delimiters.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Steelman, whose telephone number is (703) 305-4564. The examiner can normally be reached Monday through Thursday, from 7:00 A.M. to 5:30 P.M. If

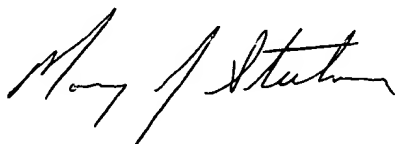
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attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (703) 305-4552.

The fax phone number is (703) 872-9306 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Mary Steelman

05/12/2004



**TUAN DAM**  
**SUPERVISORY PATENT EXAMINER**